

Characterization of the reflection effect across DOSPERT risk content domains

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Vignettes designed for the study: **gain** and **loss** domain

Health/ safety risk domain

GAIN

Today, you have been diagnosed with a fatal medical condition. You need to undergo surgery immediately. Your doctor asks you to choose one of the following two surgeries. Each surgery will save your life. The surgeries differ in how they may impact your quality of life.

You have recently rated your quality of life as 70 on a 0-100 scale. On this scale 0 represents “Might as well be dead” and 100 represents “Perfect quality of life.”

Which surgery do you choose?

- A. **Surgery Ibin:** This surgery will save your life and increase your quality of life from 70 to 80 on the scale 0-100.
- B. **Surgery Etia:** This surgery will save your life but requires additional treatment. If successful, the treatment will increase your quality of life from 70 to 90 on the scale 0-100. If unsuccessful, your quality of life will not change. The probability of the treatment being successful is X%.

LOSS

Today, you have been diagnosed with a fatal medical condition. You need to undergo surgery immediately. Your doctor asks you to choose one of the following two surgeries. Each surgery will save your life. The surgeries differ in how they may impact your quality of life.

You have recently rated your quality of life as 70 on a 0-100 scale. On this scale 0 represents “Might as well be dead” and 100 represents “Perfect quality of life.”

Which surgery do you choose?

- A. **Surgery Ibin:** bin: This surgery will save your life and decrease your quality of life from 70 to 60 on the scale 0-100.
- B. **Surgery Etia:** This surgery will save your life but requires additional treatment. If unsuccessful, the treatment will decrease your quality of life from 70 to 50 on the scale 0-100. If successful, your quality of life will not change. The probability of the treatment being unsuccessful is X%.

Gambling risk domain

GAIN

You participate in a lottery at a local fair. So far you have won an amount equal to your weekly salary. In the final stage of the lottery, the host offers you to either spin the wheel of fortune or to end the game.

Which option do you choose?

- A. **End the game:** You will receive a bonus of $\frac{1}{4}$ of your current winnings on top of what you have already won.
- B. **Spin the wheel:** You will either win a bonus equal to $\frac{1}{2}$ of your current winnings or you will end the game with the amount you have already won. The probability of winning the bonus is X%.

LOSS

You participate in a lottery at a local fair. So far you have won an amount equal to your weekly salary. In the final stage of the lottery, the host offers you to either spin the wheel of fortune or to end the game.

Which option do you choose?

- A. **End the game:** You will have to pay an amount of $\frac{1}{4}$ of your current winnings to end the game.
- B. **Spin the wheel:** You will either lose $\frac{1}{2}$ of your current winnings or you will end the game without having to pay anything. The probability of losing $\frac{1}{2}$ of your winnings is X%.

Ethical risk domain

GAIN

Filling your taxes, you notice that you can reduce your tax due by easily cheating on your taxes. Lowering your tax liability will impact the tax refund that you are to receive within the next 3 weeks.

Which option do you choose?

- A. **You do not lower your tax bill:** You will receive a tax return in the amount equal to your weekly salary.
- B. **You lower your tax bill:** If you are not caught, you will receive a tax return in the amount equal to your two weeks' salary. If you are caught, you will not receive any tax return. The probability that you will not get caught is X%.

LOSS

Filling your taxes, you notice that you can reduce your tax due by easily cheating on your taxes. Lowering your tax liability will impact the tax obligation that you are to pay within the next 3 weeks.

Which option do you choose?

- A. **You do not lower your tax bill:** You will pay taxes in the amount equal to your weekly salary.
- B. **You lower your tax bill:** If you are caught, you will pay taxes in the amount equal to your two weeks' salary. If you are not caught, you will not pay taxes. The probability that you will get caught is X%.

Social risk domain

GAIN

You are going to undertake a controversial project that will affect your neighbors. You prepare a speech to inform your neighbors about the project.

Which strategy do you choose?

- A. Short speech:** You briefly present the arguments in favor of implementing the project, which guarantees that only 1/4 of your neighbors will like you more.
- B. Long speech:** You present your case passionately and at length. If the speech is received well, half of your neighbors will like you more. However, if the speech does not resonate with your neighbors, their opinion of you will stay the same.

The probability that your speech is received well is X%.

LOSS

You are going to undertake a controversial project that will affect your neighbors. You prepare a speech to inform your neighbors about the project.

Which strategy do you choose?

- A. Short speech:** You briefly present the arguments in favor of implementing the project, which guarantees that only 1/4 of your neighbors will like you less.
- B. Long speech:** You present your case passionately and at length. If the speech is received poorly, half of your neighbors will like you less. However, if the speech does not resonate with your neighbors, their opinion of you will stay the same.

The probability that your speech is not received well is X%.

Recreational risk domain

GAIN

You are spending your vacation at a resort. A highly-rated attraction there is a hot air balloon flight, offering scenic views of the local area. Usually, the balloon flights are at the height of 500 ft. You can either take the flight today or tomorrow. How much you enjoy your flight will depend on the weather.

Which option do you choose?

- A. Fly today.** The weather is better than usual, so the resort tells you that your balloon will fly 150 ft above the usual height (it will reach 650 ft), offering even better views.
- B. Fly tomorrow.** The weather tomorrow can be either much better than usual or typical. If it is much better, your balloon will fly 300 ft above the usual height (it will reach 800 ft), offering stunning views. However, if the weather is typical, the flight will be at the usual height of 500 ft.

The probability of much better weather is X%.

LOSS

You are spending your vacation at a resort. A highly-rated attraction there is a hot air balloon flight, offering scenic views of the local area. Usually, the balloon flights are at the height of 500 ft. You can either take the flight today or tomorrow. How much you enjoy your flight will depend on the weather.

Which option do you choose?

- Fly today.** The weather is worse than usual, so the resort tells you that your balloon will fly 150 ft below the usual height (it will reach 350 ft), offering worse views.
- Fly tomorrow.** The weather tomorrow can be either much worse than usual or typical. If it is much worse, your balloon will fly 300 ft below the usual height (it will reach 200 ft), offering unsatisfying views. However, if the weather is typical, the flight will be at the usual height of 500 ft.

The probability of much worse weather is X%.

Investment/financial risk domain

GAIN

A few years ago, you bought some company stocks, which you are now required to sell. Tomorrow, the company is going to release its financial results for the previous year. The results may affect the stock price.

Which option do you choose?

- A. Sell the stocks today: If you sell today, your profit will be equal to your weekly salary.
- B. Sell the stocks tomorrow: If the stock market reacts positively to the company's financial results, your profit will be equal to your two weeks' salary. However, if the reaction is negative, your return on this investment will be zero.

The probability that the market reacts positively is X%.

LOSS

A few years ago, you bought some company stocks, which you are now required to sell. Tomorrow, the company is going to release its financial results for the previous year. The results may affect the stock price.

Which option do you choose?

- A. Sell the stocks today: If you sell today, your loss will be equal to your weekly salary.
- B. Sell the stocks tomorrow: If the stock market reacts negatively to the company's financial results, your loss will be equal to your two weeks' salary. However, if the reaction is positive, your return on this investment will be zero.

The probability that the market reacts negatively is X%.